



Enhancing Communication Between Healthcare Professionals for a Timely Diagnosis of Alzheimer's Disease

This toolkit focuses on enhancing communication strategies among healthcare professionals during the diagnosis of Alzheimer's disease

Disclaimer

This resource was developed by Eli Lilly and Company and it is intended to be used by HCPs for medical, scientific, and educational purposes. This work was inspired by established peer-reviewed research and insights from experts in Alzheimer's disease based on their perspectives and opinions as well as from data on file from multiple Lilly advisory boards.

The communication style presented is a suggestion of technique and not to be portrayed as conclusive guidance.

Please note that this is a relatively new clinical topic. The science and the clinical opportunities evolve rapidly, and so does the need to continue evolving the communication – we are providing what is currently acknowledged as best practices. However, this is likely to change as the clinical landscape advances.

Abbreviation: HCP=Healthcare Professional.



Table of Contents



Background



*Enhancing
Interprofessional
Collaboration &
Communication*



*Communication
Between Primary
Care Physicians
and Sub-
Specialists*



*Communication
Between
Dementia
Specialists and
Radiologists*



*Further
Resources and
References*

Communication Toolkit for HCPs

Objectives

01

To provide structured information for facilitating effective communication among healthcare providers during the Alzheimer's disease diagnosis, ensuring seamless collaboration between the multidisciplinary team

02

To outline best practices for sharing critical diagnostic information, including patient history, test results, and imaging findings by standardizing communication protocols and referral processes within the multidisciplinary team

03

To address and offer solutions for common communication challenges among healthcare providers, such as miscommunication, time constraints, and role confusion by leveraging technological tools (eg, electronic medical records, telemedicine) and structured case discussions

This slide deck is part of a bigger communication toolkit

Abbreviation: HCP=Healthcare Professional.



SECTION 1

Background



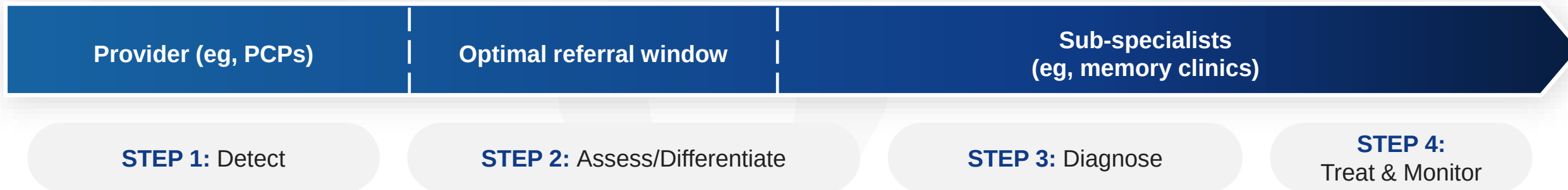
The Importance of Effective Interprofessional Collaboration and Communication in Diagnosing Alzheimer's Disease

- Alzheimer's disease is a **complex disorder**, requiring responsibility to be shared between various healthcare professionals and other stakeholders.¹ Interprofessional teams with effective communication are key components for providing a **patient-centric continuity of care and seamless transitions between diagnostic settings**^{2,3}

- With an evolving disease paradigm as a **clinical-biological construct** based on clinical phenotypes and biomarkers, there is an increased emphasis on **diverse competences**^{4,5}

- With increasing aging population and the burden of Alzheimer's disease globally, there's a need for a more **timely and accurate diagnosis**. Benefits include patient and care partners' ability to plan ahead to enable possible access to all treatment options, such as amyloid-targeting therapies.⁴⁻⁶ **Success factors and barriers** for early diagnosis have been identified as **interprofessional collaboration, support and communication, or lack thereof, respectively**^{2,6-8}

DIAGNOSTIC JOURNEY^{a,9}



^aThe Alzheimer's disease diagnostic journey may vary for each patient.

Abbreviation: PCP=Primary Care Professional.

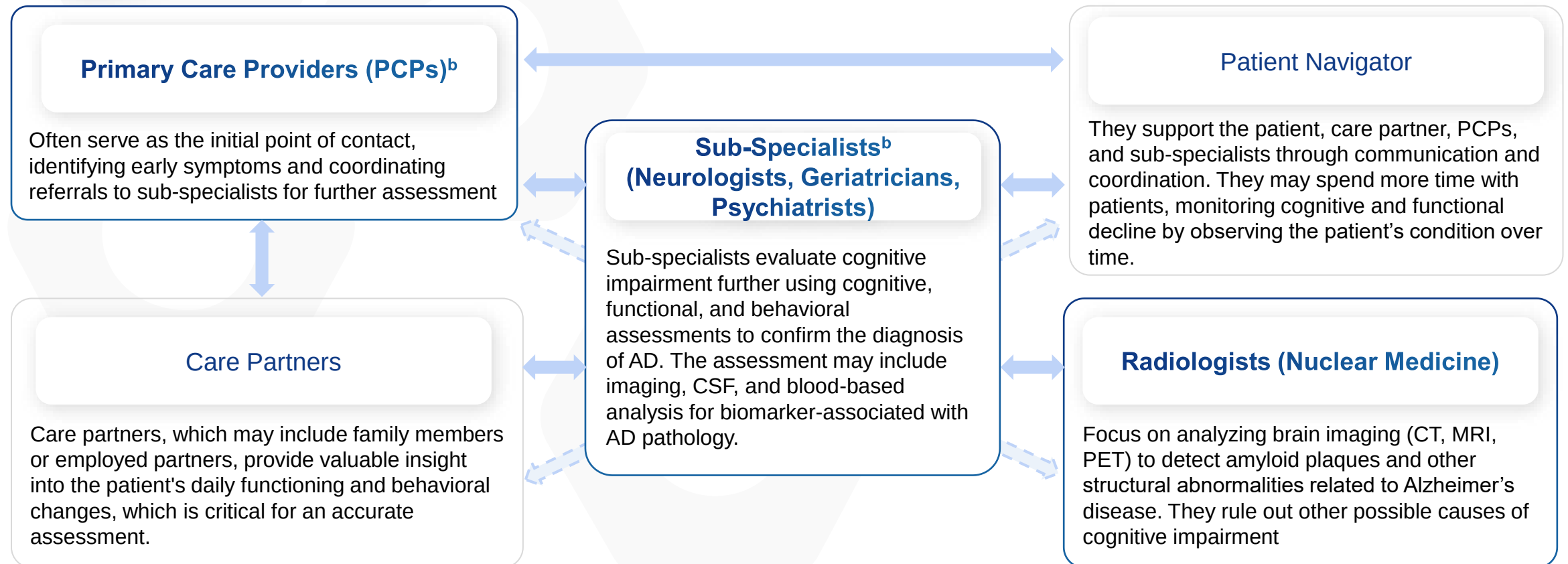
References: 1. Rolland Y, et al; IDEM investigators. *J Nutr Health Aging*. 2013;17(2):137-141. 2. Österholm J, et al. *Health Soc Care Community*. 2023;2023:1-25. 3. WHO. Global action plan on the public health response to dementia 2017–2025. 2017. Available at: <https://www.who.int/publications/i/item/9789241513487> (Accessed on May 12, 2025). 4. Hampel H, et al. *Nat Aging*. 2022;2(8):692-703. 5. Dubois B, et al. *Lancet Neurol*. 2021;20(6):484-496. 6. Judge D, et al. *Int J Alzheimers Dis*. 2019;2019:3637954. 7. Lee JH, et al. *J Alzheimers Dis*. 2024;101(1):1-12. 8. Cogswell PM et al. *AJNR Am J Neuroradiol*. 2025;46(1):24-32. 9. Porsteinsson AP, et al. *J Prev Alzheimers Dis*. 2021;8(3):371-386.



Key Team Members in Alzheimer's Disease Diagnostic Journey^a



Effective communication and coordination among specialists, PCPs, nurses, radiologists, and caregivers are crucial for providing patient-centered care. This resource focuses on PCPs, Sub-specialists, and Radiologists.



^aPatient may enter the journey at any point. ^bThis includes NPs and PAs based on their specialty.

Abbreviations: AD=Alzheimer's Disease; CSF=Cerebrospinal Fluid; CT=Computed Tomography; MRI=Magnetic Resonance Imaging; NP=Nursing Practitioner; PA=Physician Associate; PCP=Primary Care Professional; PET=Positron Emission Tomography. **Reference:** 1. Porsteinsson AP, et al. *J Prev Alzheimers Dis.* 2021;8(3):371-386.

Interprofessional Communication Can Be Challenging



Physicians hold a significant portion of the healthcare information in their minds¹



Half of the communication happens face-to-face without a formal documented network¹



Some information and communications occur or exist through various technologies¹ and may not always be complete or entirely clear²



Preferred extent and method of communication may differ between specialties^{2,3}



Physicians' education and training, shaped by their specific roles, influence their communication methods and objectives^{1,2,4}



Communication may be hindered by perceived hierarchy and authority dynamics within and between specialties¹



Perceived patient ownership may result in reluctance to share full information with other physicians¹



Physicians have time constraints or busy schedules, which may impact information sharing⁵

Members of the MDT must be intentional in communication

To address these challenges, it cannot be assumed that “simply bringing health professionals from different disciplines together will improve communication”. It is essential to ensure that the team engages in multidisciplinary collaboration, rather than only communicating from their respective areas of expertise.¹



Abbreviation: MDT=Multidisciplinary Team.

References: 1. Rowlands S, Callen J. *Eur J Cancer Care (Engl)*. 2013;22(1):20-31. 2. Braam A, et al. *J Multidiscip Healthc*. 2022;15:2277-2300. 3. Walsh KE, et al. *J Healthc Qual*. 2018;40(5):283-291. 4. Gittel JH, et al. *J Interprof Care*. 2013;27(3):210-213. 5. Fatahi N et al. *Multidiscip Healthc*. 2019;12:555-564.

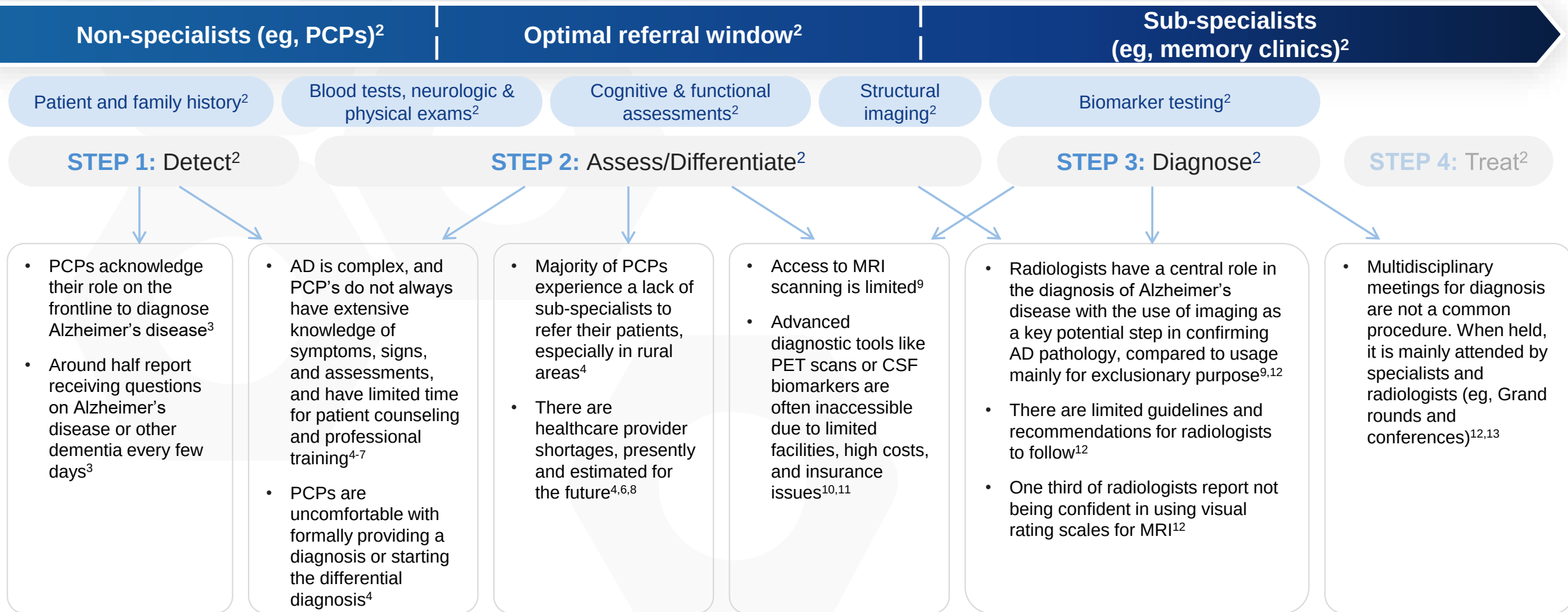


SECTION 2

Enhancing Interprofessional Collaboration & Communication

Individual Perspectives in the Interprofessional Team During the Diagnostic Journey^a

Good collaboration starts with understanding each others' perspectives¹



^aThe Alzheimer's disease diagnostic journey may vary for each patient.

Abbreviations: AD=Alzheimer's Disease; CSF=Cerebrospinal Fluid; MRI=Magnetic Resonance Imaging; PCP=Primary Care Professional; PET=Positron Emission Tomography. References: 1. Galvin JE, et al. *Neurodegener Dis Manag*. 2014;4(6):455-469. 2. Porsteinsson AP, et al. *J Prev Alzheimers Dis*. 2021;8(3):371-386. 3. 2020 Alzheimer's Disease Facts and Figures. *Alzheimers Dement* 2020;16(3):391-460. 4. 2024 Alzheimer's Disease Facts and Figures. *Alzheimers Dement* 2024;20(5):1-149. 5. Arsenault-Lapierre et al. *BMC Health Serv Res*. 2022;22(1):353. 6. Lee JH, et al. *J Alzheimers Dis*. 2024;101(1):1-12. 7. Chow AF, et al. *Can J Aging*. 2019;38(3):367-383. 8. Hegerath FM, et al. *BMC Geriatr*. 2024;24(1):37. 9. Cogswell PM, et al. *AJNR Am J Neuroradiol*. 2023;45(1):72-75. 10. Schindler SE, et al. *Nat Aging*. 2023;3(5):460-462. 11. Cibilis AS, et al. *Alzheimers Dement (Amst)*. 2015;1(1):41-47. 12. Vernooij MW, et al. *Neuroradiology*. 2019;61(6):633-642. 13. Fatahi N, et al. *Multidiscip Healthc*. 2019;12:555-564.



Standardize Protocols and Documentation



Standardized workflows, algorithms, or protocols can promote efficiency in the referral process by providing a clear division of responsibilities and checklist prompts, aiding patient identification and referral. It can also help prioritize patients and increase two-way communication between physicians.¹⁻⁵



Standardized imaging protocols can help ensure consistent communication of imaging results, which are critical for diagnosis.^{9,10}



Adhering to **established diagnostic criteria** and **tools** can help improve the efficiency and consistency of early diagnosis across clinics for patients.^{2,6-8} Conceptual alignment is needed when implementing treatments targeting underlying pathologies.^{2,6}



Semi-structured reporting and reporting templates can provide more clarity in communication, improve accuracy, as well as help with systematic imaging evaluations by both radiologists and sub-specialists.¹¹⁻¹³



Standardized referral forms can foster communication.⁵



Electronic Health Records (EHRs) can improve communication by streamlining documentation and ensuring all members of the interprofessional team have real-time access to essential patient information.¹⁴

- *Use of EHRs* may also improve rapid, detailed assessment of initial cognitive concerns¹⁵*

*EHRs vary by health system or practice environment.

References: 1. Lee JH, et al. *J Alzheimers Dis.* 2024;101(1):1-12. 2. Jack CR Jr, et al. *Alzheimers Dement.* 2024;20(8):5143-5169. 3. Österholm J, et al. *Health Soc Care Community.* 2023;2023:1-25. 4. Hegerath FM, et al. *BMC Geriatr.* 2024;24(1):37. 5. Hum S, et al. *Can Geriatr J.* 2014;17(3):95-102. 6. Alzheimer's Association. https://www.alz.org/research/for_researchers/diagnostic-criteria-guidelines (Accessed May 12, 2025). 7. Cordell CB, et al. *Alzheimers Dement.* 2013;9(2):141-150. 8. Grazia A, et al. *Alzheimers Dement.* 2023;19(6):2276-2286. 9. Cogswell PM, et al. *AJNR Am J Neuroradiol.* 2023;45(1):72-75. 10. Duchesne S, et al. *Can J Neurol Sci.* 2024:1-29. 11. Vernooij MW, et al. *Neuroradiology.* 2019;61(6):633-642. 12. Braam A, et al. *J Multidiscip Healthc.* 2022;15:2277-2300. 13. Olthof AW, et al. *J Med Syst.* 2020;44(9):148. 14. HealthIT.gov. 2013. <https://www.healthit.gov/resource/ehr-implementation-communication-guidelines> (Accessed May 12, 2025). 15. Galvin JE, et al. *Front Neurol.* 2021;11:592302.

General Advice & Good Practices

Consider defining MDT composition and roles

- It is important to consider the “expected” roles and responsibilities of different healthcare professionals in your specific context,¹ eg,
 - Who in the multidisciplinary AD care team will be responsible for requesting biomarkers of AD pathology necessary to enable treatment?
- Especially, consider how to collaborate best when physical proximity is not possible²

Plan for collective reflection, discussion, and feedback

- PCPs and specialists often miss opportunities to exchange timely feedback on referrals or test results, causing gaps in patient management³
 - Limited time for reflection or feedback is identified as a barrier in the care of patients with dementia³
- Multidisciplinary meetings in relation to cases provide a good place for discussion and feedback on the communication⁴



Prioritize multidisciplinary meetings and education sessions

- A multidisciplinary team approach is essential for Alzheimer’s disease patient care. Although members of the MDT serve distinct roles, their efficient collaboration may lead to improved patient outcomes³⁻⁶
- Multidisciplinary meetings provide an opportunity to get a holistic picture and collective assessment with all information on the table, especially in complex cases, eg, through conferences, radiology rounds, or a monthly dementia board³⁻⁶



Abbreviations: AD=Alzheimer’s Disease; HCP=Healthcare Professional; MDT=Multidisciplinary Team; PCP=Primary Care Professional.

References: 1. Liss JL, et al. *J Intern Med*. 2021;290(2):310-334. 2. Braam A, et al. *J Multidiscip Healthc*. 2022;15:2277-2300. 3. Österholm J, et al. *Health Soc Care Community*. 2023;2023:1-25. 4. Vernooij MW, et al. *Neuroradiology*. 2019;61(6):633-642. 5. Data on file. 6. Fatahi N, et al. *Multidiscip Healthc*. 2019;12:555-564.

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General Advice & Good Practices

Not all practice settings are the same

- A lack of understanding of competences across disciplines has been reported as one of the barriers to interprofessional collaboration.^{1,2} Consider the following
 - Targeted dementia training among staff and MDT members³
 - Infrastructural or technological limitations across practice settings²
 - Coordination between multiple schedules²

Work on clarity in language

- Specialty-specific jargon may create communication gaps. These can be bridged by using plain language that is understood across all professions^{1,4}
- Expressions for diagnostic certainty, like "rare" and "usual" can be unclear and are often interpreted differently by physicians, leading to inconsistencies⁵

Good general practice for consultations

- Use descriptive information and ensure to include the three core components of information^{4,5}:
 - *Relevant clinical patient information*
 - *A clear question to consulting physician*
 - *Urgency of request for prioritization*

Identify appropriate channel of communication

- Some cases of interprofessional communication may require or get increased value by in-person communication in addition to written reports to discuss nuances⁴⁻⁶
 - *Eg, for certain types of imaging results*
- Explore an appropriate communication channel for your setting, such as EHR, regular mail, telephonic communications, etc.^{3,4,7}



Abbreviations: AD=Alzheimer's Disease; HCP=Healthcare Professional; PCP=Primary Care Professional.

References: 1. Schot E, et al. *J Interprof Care*. 2020;34(3):332-342. 2. Österholm J, et al. *Health Soc Care Community*. 2023;2023:1-25. 3. 2024 Alzheimer's Disease Facts and Figures. *Alzheimers Dement*. 2024;20(5):1-149. 4. Data on file. 5. Braam A, et al. *J Multidiscip Healthc*. 2022;15:2277-2300. 6. Fatahi N et al. *Multidiscip Healthc*. 2019 Jul 19;12:555-564. 7. Gittel JH, et al. *J Interprof Care*. 2013;27(3):210-213.



SECTION 3

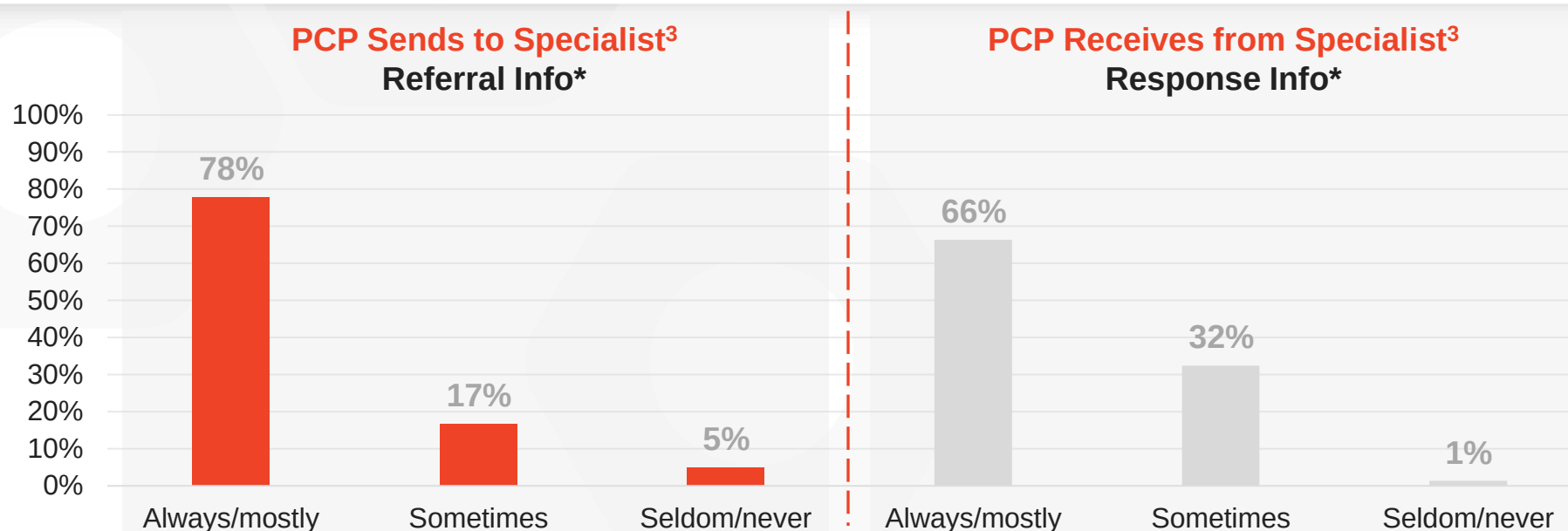
Communication Between PCPs and Sub-Specialists

Primary Care-Dementia Specialist Perceived Discrepancies in Communication and Referral Information*



Communication is one of the **key elements in the referral process**.¹ However, **incomplete documentation in referral documents** has been reported by several studies and can impact **how and when a patient gets access to a specialist**.^{1,2} Similarly, **delayed specialist notes** have been reported, which impact patient care and safety, such as **causing re-admissions and medication errors**.²

In a survey conducted in 2019, 78% of PCPs on average reported that they send a notification about patient history and the reason for consultation in their referral. A similar discrepancy has been reported in the communication back from the sub-specialist to the PCP through medical notes.¹⁻³



*Studies are not specific to the setting of dementia/Alzheimer's disease. This is an average based on the data evaluated for two tracks/groups of PCPs (n=4754) across USA.

Abbreviations: PCP=Primary Care Physician; US=United States.

References: 1. Scaioni G, et al. *BMC Fam Pract.* 2020;21(1):54. 2. Tobin-Schnittger P, et al. *Prim Health Care Res Dev.* 2018;19(3):211-222. 3. Timmins L, et al. *Ann Fam Med.* 2022;20(4):343-347.

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Factors in the Referral Process



Documentation quality has been observed to decrease due to factors such as limited time, increasing complexity, regulatory demands, and productivity requirements. Thus, **documentation becomes a matter of prioritization** by the physician. Numerous studies have highlighted the **discrepancies between the conversation and the documentation of the meeting with the patient.**¹⁻³

Missing documentation information in referral communication*:

- Inaccurate Medication list^{1,4}
- Missing diagnostic workup^{1,4}
- Presenting symptoms¹
- Level of urgency¹

Missing medical visit documentation **from sub-specialists**[†]:

- Type of cognitive assessment and scoring⁵
- Medication modifications^{*,4}
- Potential secondary diagnosis^{*,4}
- Assessment and plan⁵

In a study across specialties, ~28% of PCP's did not receive the referral documentation notes after the visit^{,4}*

Impact of including patient-related psychosocial factors or patient value tab in referral communication:

- Often, notes are missing the psychosocial factors, such as social and emotional factors, goals, and value discussions, which contribute to the humanistic factors.^{*,2,3,6,7} **A timely diagnosis is facilitated by considering patient psychosocial factors**^{8,9}
- A pilot study by Desai et al. (2021) demonstrated that the strategic inclusion of a **'patient value tab' in EHR** may **improve patient-centered care** by centralizing key information distribution among stakeholders^{*,6}

*Studies are not specific to the setting of dementia/Alzheimer's disease. †This may differ based on practice environment.

Abbreviations: EHR=Electronic Health Record; PCP=Primary Care Physician.

References: 1. Tobin-Schnittger P, et al. *Prim Health Care Res Dev*. 2018;19(3):211-222. 2. Prater L, et al. *Appl Clin Inform*. 2019;10(2):247-253. 3. Ma JE, et al. *J Am Geriatr Soc*. 2024;72(8):2500-2507. 4. Dinsdale E, et al. *Family Practice*. 2020;37(1):63-68. 5. Hegerath FM, et al. *BMC Geriatr*. 2024;24(1):37. 6. Desai AV, et al. *JCO Oncol Pract*. 2021;17(10):e1524-e1536. 7. Heckemann B, et al. *Health Communication*. 2022;37(4):418-424. 8. Linden I, et al. *Patient Educ Couns*. 2025;130:108446. 9. Dubois B, et al. *J Alzheimers Dis*. 2016;49(3):617-631.

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Factors Influencing the Referral Communication



A meta-analysis by Foy et al. (2010)* reported consistent statistically and clinically significant effects in patient outcomes from interventions of **increased interactive communication** between PCPs and specialists, such as **initial joint patient consultations, specialist attendance at PCP meetings, teleconsultation with specialists, and electronic notes**. Interventions to **improve quality of information exchange**, such as **structured forms, pathways, or reports**, further enhanced this effect.¹

Factors that may be **positively** associated with perceived PCP-Specialist communication generally*:

- Having **adequate time**, with patients during consultations^{2,3} and for establishing and engaging in communication processes generally⁴
- Use of **quality reports** for patients with chronic conditions²
- Presence of **support staff**, especially nurses, for managing patients with chronic conditions^{2,3}
- More **informal interaction** of PCPs and specialists³
 - Inclusion of **peer feedback** while writing the referral
- Reported **job satisfaction** by the PCP³
- **Mixed interventions** of health information technology and educational efforts^{5,6}
 - Use of health information technology, eg, **EHR**⁵
- Use of **structured and standardized referral templates**⁵

A note on the **geographic settings**

- A healthcare system where the **PCP acts as a gatekeeper**, can impact the communication *positively*. However, it has only shown to explain a minor part of variance between countries^{3*}
- **Rural settings** can impact the collaboration and communication *negatively*, due to differences in resources, both regarding staffing, responsibilities per team member, and access to information technology, especially if team members are **not located at the same place**^{2,4}

*Studies are not specific to the setting of dementia/Alzheimer's disease.

Abbreviations: EHR=Electronic Health Record; PCP=Primary Care Physician.

References: 1. Foy R, et al. *Ann Intern Med*. 2010;152(4):247-258. 2. O'Malley AS, et al. *Arch Intern Med*. 2011;171(1):56-65. 3. Scaioli G, et al. *BMC Fam Pract*. 2020;21(1):54. 4. Chow AF, et al. *Can J Aging*. 2019;38(3):367-383. 5. Tobin-Schnittger P, et al. *Prim Health Care Res Dev*. 2018;19(3):211-222. 6. Dinsdale E, et al. *Family Practice*. 2020;37(1):63-68.

What Does a Good Referral Report Look Like In Alzheimer's Disease Diagnosis?

From PCP to Sub-Specialist

PCPs preferably provide comprehensive information in the referral to the sub-specialist, including tests, eliminating other medically treatable causes, in order to prioritize the right patients and speed up diagnosis.¹

Essential information includes:

- Purpose of referral, rule-out and differential diagnosis¹
- Medical and family history, including comorbidities and general risk factors¹⁻³
- Medical records with all work-up to current date, including physical (general and neurological) examination¹⁻³
- Laboratory work-up, ie, blood tests for rule-out of other causes, and possibly tests for infectious disease¹⁻⁴
- Possible symptomatic treatment history (eg, cholinesterase inhibitors)¹

Ideally, the PCP also provides following*:

- Cognitive assessments and informant-based assessments (eg, MMSE, MoCA, AD8)^{1-5,7}
- Functional assessments (eg, IADL, FAST, FAQ)^{1-3,7}
 - *This is important as it provides an indicative idea of the priority of the patient, especially for identifying possible candidates for amyloid-targeting therapies¹*
- Behavioral/neuropsychiatric assessments (eg, GDS, NPI-Q)^{2,3}
- Structural imaging (MRI), where possible^{1,4,5}

To improve waiting time for potential candidates for amyloid-targeting therapy in the future, it could be considered for the PCP* to also provide:

- Biomarker test for amyloid positivity (blood-based tests⁶, PET scans, CSF tests)¹
- Genetic testing for APOE^{1,2}
- *Please note that **time constraints** and/or **confidence in testing** are often a big challenge for PCPs in practice. However, to move towards an earlier, accurate diagnosis for patients and a possibility for treatment, it has been recommended for PCPs to provide more information than the essentials¹⁻³*
- *Incorporating additional patient information, such as detailed clinical and family history, risk factors, lab work, and any other pertinent data, is crucial for aiding diagnostic accuracy and differential diagnosis. This comprehensive approach ensures that the sub-specialist has the necessary context to make a well-informed assessment, including differential diagnosis¹⁻³*

*The appropriate HCP to perform or order certain testing for patients depends on the healthcare system in your region.

Abbreviations: AD8=Ascertain Dementia 8; APOE=Apolipoprotein E; CSF=Cerebrospinal Fluid; FAQ=Functional Activities Questionnaire; FAST=Functional Assessment Staging Tool; GDS=Geriatric Depression Scale; HCP=Healthcare Professional; IADL=Instrumental Activities of Daily Living; MMSE=Mini-Mental State Examination; MoCA=Montreal Cognitive Assessment; MRI=Magnetic Resonance Imaging; NPI-Q=Neuropsychiatric Inventory Questionnaire; PCP=Primary Care Physician; PET=Positron Emission Tomography.

References: 1. Data on file. 2. Porsteinsson AP, et al. *J Prev Alzheimers Dis.* 2021;8(3):371-386. 3. Hampel H, et al. *Nat Aging.* 2022;2:692-703. 4. Lombardi G, et al. *Front Psychiatry.* 2022;13:1050583. 5. Podhorna J, et al. *Adv Ther.* 2020;37(2):883-893. 6. Dumas A, et al. *Aging Brain.* 2023;4:100093. 7. Ronner D, et al. *Br J Gen Pract.* 2025;9(1);BJGP Open.2024.0065.

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Good Practice in Referral Process of Alzheimer's Disease

• From Sub-specialist Back to PCP •

A preferred office visit note may include:

- History and psychosocial factors¹⁻³
- Evaluation of clinical findings^{1,4}
- Conclusion and diagnosis¹
- Treatment plan^{1,4}
- Follow-up recommendations and any additional referrals or testing for patient management^{1,4}



- Lack of essential notes, clinical information, and recommendations from the sub-specialist makes it difficult for the PCP to act and discuss with the patient and care partners⁴

Abbreviation: PCP=Primary Care Physician.

References: 1. Data on file. 2. Prater L, et al. *Appl Clin Inform.* 2019;10(2):247-253. 3. Heckemann B, et al. *Health Communication.* 2022;37(4):418-424. 4. Hegerath FM, et al. *BMC Geriatr.* 2024;24(1):37.



SECTION 4

Communication Between Dementia Specialists and Radiologists



Challenges in Collaboration and Communication Between Dementia Specialists and Radiologists



The role of imaging providers is essential in the diagnosis of Alzheimer's disease and has evolved rapidly in recent years, giving radiologists a central role in confirming a diagnosis. Enhanced communication between dementia specialists and radiologists is essential.^{1,2}

Lack of using
standardized reporting
templates and scanner
protocols^{*,3-5}

Limited context
provided to
radiologists^{*,3,4}

Time
constraints^{*,3}

Limited in-
person feedback
discussion^{*,3}

It is important to note that many different pathologies look similar in imaging. Appropriate clinical history context helps improve diagnostic accuracy and differential diagnosis.⁴

May result in
overlooking
pathologies^{1,4}

Challenging
prioritization^{*,3}

Challenging to
provide
feedback^{*,3}

May result in
limited trust^{*,3}

**Studies are not specific to the setting of dementia/Alzheimer's disease.*

References: 1. Vernooij MW, et al. *Neuroradiology*. 2019;61(6):633-642. 2. Cogswell PM, et al. *AJNR Am J Neuroradiol*. 2025;46(1):24-32. 3. Fatahi N et al. *Multidiscip Healthc*. 2019;12:555-564. 4. Data on file. 5. Ciblis AS, et al. *Alzheimers Dement (Amst)*. 2015;1(1):41-47.

Challenges in Collaboration and Communication Between Dementia Specialists and Radiologists



The main communication between radiologist and dementia specialist is often the imaging report, which therefore must be “easily understood, accurate, timely and appropriately detailed.”¹ The quality of the report can also impact the collegial trust and is a vital tool for decision-making.^{2*} However, the quality, accuracy, clinical relevance, and confidence also depend on the referral letter.^{*,2-4}

Important referral factors for communications to radiologists:

- Detailed information about symptoms and signs of Alzheimer’s disease rather than a general diagnosis⁵
- Requesting advanced imaging and structured reports is not a common practice⁵
- Low awareness of dementia-specific protocols for referrals¹
- Standardized ordering templates may facilitate communicating the appropriate amount of information^{1,2,6}

Important reporting factors for radiologists’ communication to the ordering providers:

- Standard reports for imaging to ensure consistent delivery of results^{*,5}
- The report should include clinical features related to the information in the referral, including disease-specific findings⁵
- A referral with too much clinical information may affect the radiologist’s objectivity while reading imaging studies⁵

**Studies are not specific to the setting of dementia/Alzheimer’s disease.*

Abbreviation: MRI=Magnetic Resonance Imaging.

References: 1. Ciblis AS, et al. *Alzheimers Dement (Amst)*. 2015;1(1):41-47. 2. Fatahi N et al. *Multidiscip Healthc*. 2019;12:555-564. 3. Chilanga et al. *BMC Health Serv Res*. 2022;22(1):893. 4. Castillo et al. *J Med Radiat Sci*. 2021;68:60–74. 5. Vernooij MW, et al. *Neuroradiology*. 2019;61(6):633-642. 6. Data on file.

Radiologists and Neuroradiologists Are Essential Experts in Improving the Diagnostic Accuracy of AD

Radiologists as key stakeholders with increased expertise

- Acknowledge the importance of radiology and neuroradiology experts for improving diagnostic accuracy¹⁻³

Education and training

- Joint activities to share knowledge about and discuss:
 - The advantages and shortcomings of different radiological methods^{*,2,4}
 - Clinical cases and patient presentations for radiologists^{*,2,4}

Collaborative discussion and review of imaging findings

- In-person communication can provide increased clinical value (even if proper written information exists). If face-to-face communication is not possible, telephone and virtual consultations can be considered^{4†}
- Direct interaction, or the practice of reviewing images together by dementia specialist and radiologist adds significant clinical value^{*,4}
- It is critical for **radiologists** to be a part of the **MDT meetings** to address **radiology findings in a timely manner** and **contribute to the reporting template**^{*,4,5}

Tailored referral communication and reporting in AD diagnosis^{*,2-4,6}

- It has been emphasized that the use of standardized templates for structured imaging reporting and referral requests tailored to different clinical scenarios may improve the systematic evaluation of findings and diagnostic accuracy
- These templates should be customized to meet the specific needs of different regions, healthcare institutions, and regulations



[†]**Studies are not specific to the setting of dementia/Alzheimer's disease. In some settings, in-person communication may not be possible at all.*

References: 1. Cogswell PM, et al. *AJNR Am J Neuroradiol.* 2025;46(1):24-32. 2. Data on file. 3. Duchesne S, et al. *Can J Neurol Sci.* 2024;1-29. 4. Fatahi N, et al. *Multidiscip Healthc.* 2019;12:555-564. 5. Vernooij MW, et al. *Neuroradiology.* 2019;61(6):633-642. 6. Olthof AW, et al. *J Med Syst.* 2020;44(9):148.

Considerations for Ordering the Imaging Studies to Diagnose Alzheimer's Disease

• From Dementia Specialist to Radiologist •

A referral communication to the radiologist should preferably include:

- **Purpose of scan:** Clinical question to be evaluated^{*,1,2}
 - This is important for the radiologists to assess and confirm the use of the most appropriate radiologic method³
- **Clinical description:** Relevant detailed clinical history enabling appropriate interpretation in a clinical context^{*,1,2}
 - Key symptoms and results of cognitive testing¹
 - Neurological pathologies can look similar → detailed clinical history is key for accuracy of interpretation¹
 - *This is also important for the sake of prioritization of referrals, and ensuring safety of procedure, eg, in using contrast-media^{*,3}*
- **Possible differential diagnoses:**
 - A radiologist can risk overlooking typical findings of other diagnoses (eg, dementia) if they are too focused on confirming Alzheimer's disease^{1,4}
- **Level of urgency:** To help prioritization^{*,5}
- Request for neurological **quantitative analysis** when necessary¹
- **Local dementia protocol requirements¹**

It's been recommended to train radiologists on the imaging needs for amyloid-targeting therapies. This can help efficiency and accuracy in the future, where the referring specialist can just indicate "AD is part of the differential diagnoses" in referral communication^{1,6}

*Studies are not specific to the setting of dementia/Alzheimer's disease.

Abbreviation: AD=Alzheimer's Disease.

References: 1. Data on file. 2. Castillo, et al. *J Med Radiat Sci.* 2021;68:60-74. 3. Chilanga, et al. *BMC Health Serv Res.* 2022;22(1):893. 4. Vernooij MW, et al. *Neuroradiology.* 2019;61(6):633-642 5. Fatahi N, et al. *Multidiscip Healthc.* 2019;12:555-564. 6. Duchesne S, et al. *Can J Neurol Sci.* 2024:1-29.

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Good Practice in Imaging Process of Alzheimer's Disease

• From Radiologist Back to Dementia Specialist •

The typical report should highlight pertinent positive or negative findings and include (depending on purpose):

- **Volumetrics, standardized volumes**^{1,2}
- **Vascular burden**^{1,2}
- **Regional atrophy**^{1,2}
- **Quantitative analysis** if requested/relevant:
 - *MRI: Eg, Fazekas score for vascular burden, or degree of hippocampal volume loss measured through AI-software*^{1,2}
 - *PET: Eg, SUVR scores and Centiloids*¹
- For consideration of **amyloid-targeting therapy**: Findings of microhemorrhages, superficial siderosis, or indications of cerebral amyloid angiopathy^{1,2}
- **Degree of diagnostic certainty**: Reporting precision of the interpretation helps accurate diagnostic decision-making^{1,3}



In addition to a report, in-person communication can be useful in case of pertinent positive findings¹



Using standardized scanner protocols and reporting templates is a high priority^{1,3}

Share the brain scans with marked findings^{*,3,4}

- This empowers neurologists to review the findings directly and enables them to take appropriate actions¹

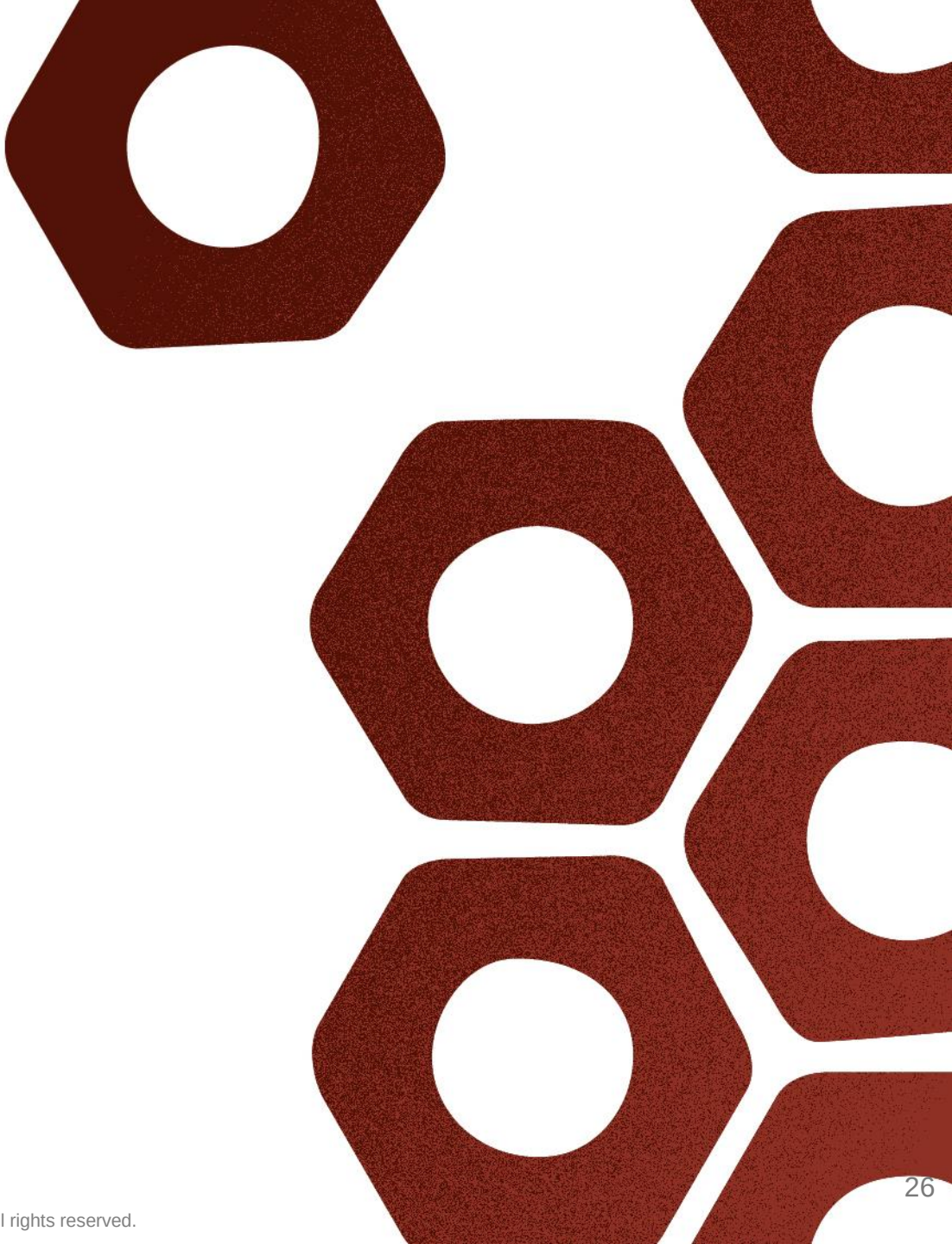
Adapt the reporting based on information flow – Align reports with what the patient has already been informed about. For example, when confirming AD using imaging, consider drafting an initial descriptive report intended for the referring physician that avoids prematurely sharing conclusions with the patient. Ensure that the patient is informed about the report within an appropriate time frame to maintain transparency.¹ It's recommended that, unless a specific diagnosis has been requested, the report should only provide "a possible differential diagnosis".⁵



**Studies are not specific to the setting of dementia/Alzheimer's disease.*

Abbreviations: AD=Alzheimer's Disease; AI=Artificial Intelligence; MRI=Magnetic Resonance Imaging; PET=Positron Emission Tomography; SUVR=Standardized Uptake Value Ratio.

References: 1. Data on file. 2. Cogswell PM, et al. *AJNR Am J Neuroradiol*. 2025;46(1):24-32. 3. Siström CL, et al. *J Am Coll Radiol*. 2005;2(2):159-167. 4. Fatahi N et al. *Multidiscip Healthc*. 2019;12:555-564. 5. Vernooij MW, et al. *Neuroradiology*. 2019;61(6):633-642.



SECTION 5

Further Resources and References

Communication to Support Patient's Journey Through AD Diagnosis

Utilizing a standardized protocol tailored to the healthcare environment is crucial during the patient journey. This ensures that key information is collected and appropriate decisions are made at each stage, from detection to treatment and monitoring. Effective communication among healthcare professionals, patients, and care partners is also vital for improving care.

This slide deck is part of a larger communication toolkit that provides general advice and best practices around communication about Alzheimer's disease (AD) in clinical practice.

Abbreviation: AD=Alzheimer's Disease.



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